UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

Refer to:
OSB1999-0264

September 23, 1999

Mr. Russell D. Peterson
Fish and Wildlife Service
Oregon State Office
ATTN: Jennifer Thompson
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266

Re: ESA Section 7 Formal Consultation on the Mt. Scott Creek Fish Habitat Enhancement Project

Dear Mr. Peterson:

This letter represents the National Marine Fisheries Service's (NMFS) Biological/Conference Opinion (Opinion), pursuant to Section 7(a)(2) of the Endangered Species Act (ESA), that the effects of the Mt. Scott Creek Fish Habitat Enhancement Project, together with cumulative effects and the effects of the environmental baseline, are not likely to jeopardize the continued existence of certain listed, proposed and candidate fish species. This letter also authorizes incidental take associated with the subject activities.

Background

On June 2, 1999, the U.S. Fish and Wildlife Service (FWS) sent a letter to Steve Morris, NMFS, requesting informal consultation for the Mt. Scott Creek Fish Habitat Enhancement Project, which is one of the FY98-99 Metropolitan Greenspaces Program grant projects. Enclosed in the June 2, 1999 letter was a Biological Assessment (BA). A revised BA was submitted via e-mail on July 19, 1999. Due the nature of the proposed project (i.e., placement of large woody debris (LWD) in areas that possibly contain juvenile anadromous fish), the NMFS does not concur with the FWS' determination of "not likely to adversely affect" the identified species. Because there is more than a negligible potential for incidental take of listed species, NMFS is therefore providing this Opinion, including an Incidental Take Statement, to conclude formal consultation.

The specific listed and proposed Evolutionarily Significant Units[1] (ESU) and candidate species considered in this Opinion are:
ESUs Listed as Threatened:

Lower Columbia River (LCR) steelhead *(Oncorhynchus mykiss)*
Lower Columbia River (LCR) chinook salmon (fall) *(O. tshawytscha)*
Upper Willamette River (UWR) chinook salmon (spring) *(O. tshawytscha)*

ESU Proposed as Threatened:

Southwestern Washington/Columbia River (SW/CR) cutthroat trout (*O. clarki clarki*)

ESU Candidate Species:

Southwest Washington/Lower Columbia River (SW/LCR) coho salmon *(O. kisutch)*

Proposed Action

The project will occur in Mt. Scott Creek near 82nd Avenue and Harmony Road in Clackamas County, Clackamas, Oregon. The site is on an undeveloped, 70 acre site owned by Clackamas County. This area is currently being used as a regional flood control facility. A large flood control structure has been built less than a mile downstream with the intention that under flood conditions, the entire site can flood and store surface water.

The Oregon Department of Transportation and other partners have proposed to remove a barrier to fish passage under I-205, which will provide access to almost half of the watershed for steelhead and salmon. However, the lack of refugia areas in the creek may result in the flushing of juveniles downstream under high flow conditions. The Clackamas County Water and Environment Services (WES) has partnered with Oregon Department of Fish and Wildlife (ODFW), the Friends of Kellogg/Mt. Scott Creeks, the Friends of Trees, Clackamas County Development Agency, North Clackamas Parks and Recreation, and Precision Castparts to improve in-stream habitat. This consultation covers the issuance of a Greenspaces grant[2] to support the implementation of this project.

WES has proposed to place large woody debris (LWD) and boulders in a 1,600 foot section of Mt.

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[1] For the purposes of conservation under the Endangered Species Act, an Evolutionarily Significant Unit (ESU) is a distinct population segment that is substantially reproductively isolated from other conspecific population units and represents an important component in the evolutionary legacy of the species (Waples, 1991).

[2] The U.S. Fish and Wildlife Service and Metro, a regional government, initiated a partnership in 1991 called the Metropolitan Greenspaces Program (Program). The Program is a regional, bi-State, four-county approach to addressing natural resource issues in the rapidly urbanizing Portland, Oregon/Vancouver, Washington metropolitan area. One of the main components of the Program involves allocating a portion of the funding to fish and wildlife habitat restoration and environmental education projects through the Metropolitan Greenspaces Habitat Restoration, Environmental Education and Salmonid Education and Enhancement Grant Programs (Greenspaces Grant Programs).

Scott Creek to provide salmonid refugia areas. WES ran a hydrologic model to select the best places for LWD placement, and to predict how the project will impact the floodplain. LWD will be provided from various off-site sources, and all material will be fir or cedar. Rocks, cabling, and other materials will be used as necessary to secure the LWD. The LWD and rock structures (root wads, single- and double-wing deflectors, and cover logs) will be designed and placed in the stream according to current ODFW guidelines. Structures will be located at, or below, the bankfull stream stage. ODFW staff were directly involved in the project design, and they will be on-site during construction to ensure that the project is completed properly.

WES has also proposed to regrade approximately 100 feet of the streambank. Locations have been selected where the channel is relatively straight. Work will occur above the bankfull stage, changing vertical slopes to 3:1 or more gradual to revegetate and diversify the riparian zone and reduce erosion. Additional work proposed includes constructing an alcove approximately 50 feet long and removing two concrete bridge supports from an old, dilapidated stream crossing. These components of the project will diversify and improve the channel, reduce erosion, increase the flood storage capacity on the site, and improve conditions for revegetation efforts.

During all phases of project construction, mature trees and other natural structures will be avoided. Excavated soil will be trucked-off site and used as fill by the Clackamas County Development Agency for various road projects in the area. Erosion control blankets and silt fences will be installed on-site per WES Erosion Control Standards. Disturbed areas and streambanks will be revegetated in the fall with native vegetation that will provide long-term value to both water quality and fish and wildlife on the site. All in-water work will occur between July 1 and September 30, in accordance with ODFW's recommended in-water work period.

Biological Information and Critical Habitat

A list of all the listed and proposed species and their associated critical habitat information that are covered in this consultation is provided in Table 1. References for additional background on biological information and historical population trends are also provided.

The action area is defined by the ESA regulations (50 CFR Part 402) as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." The action area includes proposed designated critical habitat within Mt. Scott Creek at the project site downstream to the mouth (approximately the lower 4 miles of the Creek). This area serves as a migratory corridor for both adult and juvenile life stages of all listed species under consideration in this BO. This area may also serve as a rearing area for juveniles. Essential features of the adult and juvenile migratory corridor for the species are: (1) Substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food (juvenile only), (8) riparian vegetation, (9) space, and (10) safe passage conditions (50 CFR Part 226). The essential features this proposed project may affect are water quality, and riparian vegetation resulting from construction activities and safe passage conditions as a result of the structures placed in the river.

Table 1. References for additional background on listing status, biological information, and critical habitat elements for the listed and proposed species addressed in this consultation.

Species	Listing Status		Critical habitat	Biological Information, Historical Population Trends
	Proposed Rule	Final Rule		
Lower Columbia River Steelhead		March 19, 1998; 63 FR 13347	February 5, 1999; 64 FR 5740 (PROPOSED RULE)	Busby *et al*. 1995; Busby *et al*. 1996
Lower Columbia River Chinook Salmon		March 24, 1999; 64 FR 14308	March 9, 1998; 63 FR 11482 (PROPOSED RULE)	Myers *et al*.1998; Healey 1991
Upper Willamette River Chinook Salmon		March 24, 1999; 64 FR 14308	March 9, 1998; 63 FR 11482 (PROPOSED RULE)	Myers *et al*.1998; Healey 1991
Southwestern Washington/ Columbia River Coastal Cutthroat Trout	April 5, 1999; 64 FR 16397		N/A	Johnson *et al*.1999; Trotter 1989

Evaluating Proposed Actions

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by its implementing regulations (50 CFR 402). When the NMFS issues a conference or biological opinion, it uses the best scientific and commercial data available to separately determine whether a proposed Federal action is likely to: (1) jeopardize the continued existence of a proposed, listed, or candidate species, and/or (2) destroy or adversely modify a proposed or listed species' critical habitat. This analysis involves the following steps: (A) define the biological requirements of the species; (B) evaluate the environmental baseline relative to the species' current status; (C) determine the effects of the proposed or continuing action on the species; (D) determine whether the species can be expected to survive with an adequate potential for recovery under the effects of the proposed or continuing action, the environmental baseline and any cumulative effects, and considering measures for survival and recovery specific to other life stages; and (E) identify reasonable and prudent alternatives to a proposed or continuing action that is likely to jeopardize the continued existence of the species.

Furthermore, NMFS evaluates whether the action, directly or indirectly, is likely to destroy or adversely modify the listed species' critical habitat. The NMFS must determine whether habitat modifications appreciably diminish the value of critical habitat for both survival and recovery of the listed species. The NMFS identifies those effects of the action that impair the function of any essential element of critical habitat. The NMFS then considers whether such impairment appreciably diminishes

the habitat's value for the species' survival and recovery. If NMFS concludes that the action will adversely modify critical habitat it must identify any reasonable and prudent measures available.

For the proposed action, NMFS's jeopardy analysis considers direct or indirect mortality of fish attributable to the action. NMFS's critical habitat analysis considers the extent to which the proposed action impairs the function of essential elements necessary for adult and juvenile migration and rearing of the listed salmon under the existing environmental baseline.

A. Biological Requirements

The first step in the method the NMFS uses in applying the ESA standards of Section 7(a)(2) to Pacific salmonids is to define the species' biological requirements that are most relevant to each consultation. The relevant biological requirements are those necessary for the listed and proposed species to survive and recover to a naturally reproducing population level at which protection under the ESA would become unnecessary. Adequate population levels must safeguard the genetic diversity of the listed stock, enhance their capacity to adapt to various environmental conditions, and allow them to become self-sustaining in the natural environment.

The NMFS finds that these biological requirements are best expressed in terms of environmental factors that define properly functioning freshwater aquatic habitat necessary for the survival and recovery of the listed species. Individual environmental factors include water quality, habitat access, physical habitat elements, river channel condition, and hydrology. These are measurable variables, with properly functioning values estimated using the best available information as those necessary for sufficient prespawning survival and distribution, spawning success, egg-to-smolt survival, smolt emigration survival and timing, and smolt condition to allow the long-term survival of the species. Properly functioning watersheds, where all of the individual factors operate together to provide healthy aquatic ecosystems, are necessary for the survival and recovery of these species.

For this consultation, the most relevant biological requirements are improved habitat characteristics that function to support successful migration and rearing. The current status of the listed and proposed species, based upon their risk of extinction, has not significantly improved since the species was listed.

B. Environmental Baseline

The environmental baseline is an analysis of the effects of past and ongoing human and natural factors leading to the current status of the species or its habitat and ecosystem within the action area. The action area covered by this Opinion is the Mt. Scott Creek where the project will occur downstream to the mouth (approximately the lower 4 miles of the Creek).

The biological requirements of the listed and proposed species are currently not being met under the environmental baseline. Their status is such that there must be a significant improvement in the environmental conditions they experience over those currently available under the environmental baseline. Any further degradation of these conditions would have a significant impact due to the amount of risk they presently face under the environmental baseline.

Analysis of Effects

A. Effects of Proposed Action

This project may cause short-term displacement of juveniles while the LWD is being placed in Mt. Scott Creek. Also, this project is likely to result in short-term water quality impacts due to increased turbidity during and immediately following the construction as the site is stabilizing. However, the Best Management Practices (use of erosion control fabric and silt fences, minimization of disturbed areas, and revegetation of disturbed areas) will aid in stabilizing the site, and will minimize the risk of both short- and long-term erosion. Streambank and ground disturbance caused by the heavy equipment accessing the project site will be minimal. Several relatively open access points will be used, and efforts will be made to avoid adverse impacts to trees and shrubs on the site. An existing thick layer of grasses and herbaceous species provide ground cover and will aid in retaining soil.

In the long term, the project is intended to diversify the channel and provide refugia for salmonids and other aquatic species. The in-stream structures will serve to dissipate stream energy, reduce the erosive force of the stream on vulnerable banks, and provide areas for pools and gravel bars to form. In addition, the project is expected to improve riparian functions and values by enhancing the native plant community. In turn, these efforts will improve the habitat quality, provide a source for large woody debris recruitment, improve bank stability, reduce erosion, and improve micro-climatic conditions over the long term.

B. Critical Habitat

As described in previous sections of this Opinion, the proposed project may affect in the short-term some essential features of the proposed critical habitat of LCR steelhead, LCR chinook salmon, and UWR chinook salmon. Overall though, this project will result in improvement to critical habitat as described in the preceding section.

C. Cumulative Effects

Cumulative effects are defined in 50 CFR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." For the purposes of this analysis, the action area encompasses the Mt. Scott Creek, where the project will occur, downstream to the mouth (approximately the lower 4 miles of the Creek). Future Federal actions are being (or have been) reviewed through separate section 7 consultation processes. The NMFS knows of no non-Federal actions that are reasonably certain to occur that may take listed salmonids within the action area.

Conclusion

NMFS has determined that, based on the available information, the FWS' issuance of a grant for the proposed Mt. Scott Creek Fish Habitat Enhancement Project is not likely to jeopardize the continued existence of LCR steelhead, LCR chinook salmon, UWR chinook salmon, SW/CR cutthroat trout, or SW/LCR coho salmon, nor will it result in the destruction or adverse modification of proposed critical habitat of the LCR steelhead, LCR chinook salmon, or UWR chinook salmon.

The NMFS reached this conclusion because: 1) Erosion control fabric and silt fences will be installed to minimize sediment delivery to the creek; 2) native vegetation will be protected from disturbance to the maximum extent possible; 3) all in-water work will be conducted during the ODFW's in-water work period, a time when the least amount of listed fish will be present in the project area; 4) all disturbed areas will be revegetated in the fall with native vegetation to stabilize the site, and provide long-term value to water quality and fish; and 5) proposed critical habitat will be altered to the benefit of the listed anadromous fish species.

Incidental Take Statement

Sections 4(d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patters such as breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of Section 7(b)(4) and Section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement (ITS) specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts, and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures. An ITS does not apply to candidate or proposed species. While effects on SW/LCR coho salmon and SW/CR cutthroat trout were considered in this Opinion, the reasonable and prudent measures and terms and conditions set forth in this ITS do not apply to SW/LCR coho salmon and SW/CR cutthroat trout. Should either of these species become listed in the future, this ITS would become effective for these species upon adoption of this conference opinion as a biological opinion.

The measures described below are non-discretionary. They must be implemented by the action agency so that they become binding conditions necessary in order for the exemption in Section 7(o)(2) to apply. The FWS has a continuing duty to regulate the activity covered in this incidental take statement.

If the administrative unit: (1) fails to adhere to the terms and conditions of the incidental take statement; and/or (2) fails to retain the oversight to ensure compliance with these terms and conditions, the protective coverage of Section 7(o)(2) may lapse.

Amount or Extent of the Take

Notwithstanding the NMFS' conclusion that the subject proposed project is not expected to jeopardize the continued existence of LCR steelhead, LCR chinook salmon, UWR chinook salmon, SW/CR cutthroat trout, or SW/LCR coho salmon, there may be short-term impacts and NMFS anticipates that there could more than a negligible likelihood of incidental take of these species from some of the actions. The subject action, however, as described in the Opinion, is expected to result in a very low level of incidental take of listed and proposed species in the proposed action area. Effects of the action such as these are largely unquantifiable, but are not expected to be measurable as long-term effects on the species' habitat or population levels. Therefore, even though the NMFS expects an incidental take to occur as a result of the action covered by this Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the listed and proposed species themselves. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on the information in the BA, the NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the action covered by this BO.

Reasonable and Prudent Measures

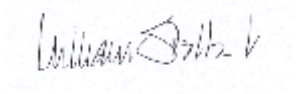
The NMFS believes that the incidental take of the species covered by this Opinion that is likely to occur as a result of the proposed action has been adequately minimized by the project design and mitigation. Therefore reasonable and prudent measures to further reduce this incidental take are not necessary.

Reinitiation of Consultation

Reinitiation of consultation is required if: (1) The amount or extent of taking specified in the incidental take statement, above, is exceeded, (2) the action is modified in a way that causes an effect on the listed species that was not previously considered in the BA and this Opinion; (3) new information or project monitoring reveals effects of the action that may affect listed species in a way not previously considered; or (4) a new species is listed or critical habitat is designated that may be affected by the action (50 CFR § 402.16).

If you have any questions, please contact Michelle Day of my staff in the Oregon State Branch Office at (503) 231-6938.

Sincerely,



William Stelle, Jr.
Regional Administrator

References

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the sources of data, information and references used in developing this Biological and Conference Opinion in addition to that submitted by the FWS.

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Trotter, P. C. 1989. Coastal Cutthroat Trout: A Life History Compendium. Transactions of the American Fisheries Society 118:463-473.

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